CLAIMS

1. A graphics device comprising:

a mechanism to receive a plurality of data requests in a particular order;

a multipurpose buffer mechanism to simultaneously monitor a status of said plurality of data requests; and

a mechanism to output responses to said plurality of data requests in said particular order.

2. The graphics device of claim 1, wherein said multipurpose buffer mechanism maintains information regarding said plurality of data requests to a plurality of memory locations.

3. The graphics device of claim 1, wherein said multipurpose buffer mechanism comprises an age counter section and a buffer control section.

4. The graphics device of claim 3, wherein said age counter section comprises a plurality of shift registers each corresponding to one of said plurality of data requests.

5. The graphics device of claim 3, wherein said buffer control section identifies a status of each of said plurality of data requests.

6. The graphics device of claim 3, wherein said multipurpose buffer mechanism determines an age of said plurality of data requests stored in said multipurpose buffer mechanism.

7. The graphics device of claim 6, wherein said age is determined based on said age counter section.

8. A system to process a plurality of data requests, said system comprising:

a plurality of memory locations each to store data; and

a multipurpose buffer mechanism to maintain an ordering of said data requests to said plurality of memory locations and data responses from said plurality of memory locations.

9. The system of claim 8, wherein said multipurpose buffer mechanism simultaneously maintains information regarding said plurality of data requests.

10. The system of claim 8, wherein said multipurpose buffer mechanism comprises an age counter section and a buffer control section.

11. The system of claim 10, wherein said age counter section comprises a plurality of shift registers each corresponding to a different one of said plurality of data requests.

12. The system of claim 10, wherein said buffer control section identifies a status of each of said plurality of data requests.

13. The system of claim 10, wherein said multipurpose buffer mechanism determines an age of said plurality of data requests in said multipurpose buffer mechanism.

14. The system of claim 13, wherein said age is determined based on said age counter section.

15. A computer graphics system comprising a device to handle a plurality of graphics data requests to different memory agents based on an age mechanism.

16. The computer graphics system of claim 15, wherein said plurality of data requests are received from a graphics engine.

17. The computer graphics system of claim 16, wherein said device comprises a multipurpose buffer mechanism that maintains an order of said data requests to said different memory agents when providing responses back to said graphics engine.

18. The computer graphics system of claim 17, wherein said multipurpose buffer mechanism simultaneously maintains information regarding said plurality of data requests.

19. The computer graphics system of claim 17, wherein said multipurpose buffer mechanism comprises an age counter section corresponding to said age mechanism and a buffer control section.

20. The computer graphics system of claim 19, wherein said age counter section comprises a plurality of shift registers each corresponding to a different one of said plurality of data requests.

21. The computer graphics system of claim 19, wherein said buffer control section identifies a status of each of said plurality of data requests.

22. The computer graphics system of claim 19, wherein said multipurpose buffer mechanism determines an age of operations stored in said multipurpose buffer mechanism.

23. The computer graphics system of claim 22, wherein said age is determined based on said age counter section.

24. A method of obtaining data for a graphics engine comprising:

receiving a plurality of data requests in a particular order;

obtaining data regarding said plurality of data requests from a plurality of memory devices; and

returning responses of said plurality of data request to said graphics engine in said particular order.

25. The method of claim 24, wherein obtaining said data comprises monitoring a status of a plurality of operations regarding said plurality of data requests.

26. The method of claim 24, wherein obtaining said data comprises maintaining an age

counter for said plurality of data requests.

27. The method of claim 26, wherein obtaining said data further comprising determining an oldest age for said plurality of data requests.

28. A method comprising:

receiving a plurality of data requests from a graphics engine;

simultaneously monitoring a status of each of said data requests to a plurality of memory locations; and

returning data to said graphics engine from said plurality of memory locations.

29. The method of claim 28, wherein simultaneously monitoring comprises utilizing an age counter mechanism for said plurality of data requests.

30. The method of claim 29, wherein utilizing said age counter mechanism comprises determining an oldest age for said plurality of data requests.

31. The method of claim 30, wherein utilizing said age counter mechanism further comprises performing said one of said plurality of requests based on said determined oldest age.